KAISER•HILL
COMPANY

January 23, 2004

04-RF-00105

Frazer R. Lockhart
Manager
DOE, RFPO

KAISER-HILL COMPREHENSIVE CORRECTIVE ACTION PLAN – AMP-001-04

Ref: John T. Conway, Chairman, DNFSB, ltr, to The Honorable Spencer Abraham, December 2, 2003

The Defense Nuclear Facilities Safety Board (the Board) requested that the Department of Energy, Rocky Flats Project Office (DOE-RFPO) provide a corrective action plan regarding how DOE and its contractor at the Rocky Flats Environmental Technology Site (RFETS) will address the findings documented in the referenced correspondence. This letter outlines the major actions being taken by Kaiser-Hill Company, LLC (Kaiser-Hill) in response to the concerns and issues raised. These actions are specifically targeted to address the problems that are associated with:

- Implementing the five core functions of Integrated Safety Management.
- Improving work planning, with particular attention paid to hazard analysis.
- Strengthening our Safety Management Program with a major focus on the combustible control program.
- Fully understanding the Building 371 Glove Box 8 fire event and failures, including mistakes made during the building evacuation.

Building 371 Glovebox 8 Fire

Mark Spears, my Vice President and Project Manager for Material Stewardship, is leading an independent investigation focused on the glove box 8 fire in Building 371. That investigation is underway with a well-qualified team of independent experts. To ensure his full attention to this investigation, I have directed him to delegate the day-to-day operations of Material Stewardship to his Deputy Project Manager.

The current schedule for that investigation includes:

- Interviews and field investigation work, completed January 20, 2004.
- Discussion of investigation and preliminary results with Board staff (Massie), completed January 21, 2004.
- Investigation Report review and approval, scheduled for February 6, 2004.

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- Completion of the Independent Fire Cause and Origin report by February 2, 2004.
- Briefings with the DNFSB and DOE Headquarters staff the week of February 16, 2004.

Sitewide Implications and Corrective Actions

The fire, your report, and our subsequent evaluations have raised larger questions about the health of the Site's ISM system implementation. Independent from the investigation of the fire, I have embarked on four additional reviews to address these broader issues:

1. A cause analysis of three events (Valve Vault 14 demolition, isolation of incorrect fire protection riser in Building 440, and Zone I duct removal in Building 707 E Module) that had been reported to the Price Anderson Office of Enforcement. This cause analysis was performed by the Safety, Engineering, and Quality Programs (SE&QP) staff with Project support. In addition to the three events cited above, I asked the team to evaluate other significant work planning and work control events that have occurred over the past year. This team reviewed over 1500 events reported through our Safety Analysis Center (SAC) and identified 103 with specific work planning and execution issues requiring in-depth analysis.

   The results of the analysis indicated that 31% of the work control events over the last year were related to inadequate work package development, and 47% were related to inadequate work package compliance.

2. A review of several significant events during FY03. These include the issues identified in the DNFSB letter concerning Integrated Safety Management (ISM), the glovebox fire in B371, and the Price Anderson Investigation Summary. The team developed a list of underlying, common causes and recommended a comprehensive corrective action plan to address those causes.

3. An independent review of key safety functions including cause analysis, corrective actions, and assessments by a corporate team from CH2M Hill. This review was started January 12, 2004.

4. An independent review of our Integrated Safety Management System by a team from Washington Safety Management Solutions, LLC. This review is scheduled to begin January 26, 2004.

Based on the results from 1 and 2 above, it is clear that the following weaknesses exist:

- As the Site has progressed from nuclear operations to D&D, we have seen an erosion of compliance with work packages and procedures. Analysis of work control related events and workforce feedback indicate that some levels of supervision and some work teams do not view D&D work packages and procedures as necessary to performing work safely.

- A number of successes in production, reductions in significant nuclear hazards as the Special Nuclear Material (SNM) has left the Site, a transition to conventional industrial hazards, and improvements in OSHA statistics led to overconfidence and a tendency to downplay the significance of events, errors and leading indicators.

- The emphasis on line management ownership of safety led to a lack of balance between project authority and independent compliance and safety functions.

To address these weaknesses, a comprehensive set of corrective actions was developed and approved by the newly formed Executive Safety Review Board (ESRB). Further corrective actions will be developed as items 3 and 4 above are completed. Attached is an initial, draft corrective action plan that focuses on these underlying weaknesses to begin to strengthen three basic areas:

- Work Planning and Execution
- Cause Analysis and Corrective Actions
- Assessments

The corrective action starts with me. I have made my performance and safety expectations clear throughout line management. I have met collectively and individually with my project managers and reinforced my expectations in the areas of:

- Accountability for both safety and performance
- Critical cause analyses and effective corrective actions
- Floor presence and mentoring by Senior Management and Safety Professionals
- Open internal and external reporting

- Procedural compliance
- Self and independent assessments

To drive enduring results I have formed and personally chair the ESRB. The ESRB was established to oversee the identification, analysis, reporting, and corrective actions of safety significant events and issues with programmatic implications. The purpose of the ESRB is:

- Provide senior, seasoned crosscutting perspective
- Ensure root causes are accurately determined
- Ensure proposed corrective actions adequately address the causes
- Provide strong corporate support for corrective action implementation
- Provide assurance that corrective actions have achieved the desired results
- Provide feedback and senior management direction concerning the focus and conduct of assessments

I have taken steps to promote an active and productive interaction between SE&QP and the Projects that emphasizes a self-critical, objective assessment of safety and compliance. A balanced set of critical independent assessments and self-assessments is being scheduled based on risk and potential consequences. These are aimed at providing useful and timely information to line management for identifying safety issues, preventing future events, and highlighting opportunities for improvement.

I am in the process of personally re-emphasizing to line management (Vice Presidents through job supervisors) their accountability for compliance with Kaiser-Hill and DOE requirements.

We have looked carefully and introspectively at the Board letter and at other indications of our safety performance. A detailed crosswalk was used to evaluate our proposed corrective actions to each of the specific issues in the Board letter. I believe the commitments contained in the table below will effectively address both the findings and the root causes of the issues identified in the letter.

Action	Investigation/ Assessment	Report Completion	Corrective Actions Identified	Corrective Actions Implemented	Effectiveness Assessment
Independent Building 371 GB 8 Fire Investigation	12/19/04 - 2/2/04	2/6/04	March 2004	TBD	TBD
Cause Analysis of 3 events reported under PAAA (Item 1)	10/29/03 - 11/24/03	12/10/03	January 2004	May 2004	November 2004
Collective review of corrective action plans for FY03 significant events (Item 2)	12/29/03 - 1/9/04	1/9/04	1/21/04	May 2004	October 2004
Corporate independent review of key safety functions (Item 3)	1/12/04 - 1/16/04	1/30/04	February 2004	TBD	TBD
Independent review of ISM System (Item 4)	1/26/04 - 2/6/04	2/13/04	March 2004	TBD	TBD

As line management is accountable for safety, I am looking forward to working with you and your staff as we work together to ensure the site is closed safely.

Alan M. Parker
President & CEO
Kaiser-Hill Company, LLC

Attachment:
As Stated

Original and 1cc – Frazer R. Lockhart

cc:
Ed Westbrook – DOE, RFPO

Site Issue	Desired Outcome		Corrective Actions	Schedule
Site performance, work force feed back, and analyses of work control related events over the last year indicate that 47% of work control failures were the result of procedural non-compliance, 31% were poorly written, and that some levels of supervision and some work teams do not view D&D work packages and procedures as necessary to performing work safely. A number of successes in production, reductions in significant nuclear hazards, a transition to conventional industrial hazards, and improvements in OSHA statistics led to overconfidence and a tendency to downplay the significance of events, errors and leading indicators.	All levels of the workforce, including subcontractors, develop work control documents that provide adequate controls and follow those documents.	1	CEO clarify expectations with VPs on: • Accountability and Performance • The need for robust, self critical cause analyses; ensuring that cause analysis teams are sufficiently staffed; and effective corrective actions • Value of on-the-floor presence of all levels of Management and Safety Professionals, and mentoring as an effective tool • Need for open internal and external reporting • Importance of Procedural Compliance • Value and importance of both self & independent assessments CEO discuss the initiating deficiencies, causes, and corrective actions of this plan, and expectations and accountability with managers down to the job supervisor level. VPs clarify expectations with the workforce on importance of procedural compliance.	Parker 1/30/04 Parker 2/27/04 Project VPs 2/27/04
	The CEO is confident that the workforce understands and believes messages being sent by management.	2	CEO establish communication method with job supervisors to verify that messages being sent to the workforce are being accurately received.	Parker 2/27/04
	The prepared procedures and work packages are useful to the work team in getting the work done safely and efficiently. Work teams use work packages and procedures to complete work activities.	3	Provide clear guidance and expectations for effectively developing and using procedures and work packages. a. Revise IWCP to reduce unnecessary complexity and provide clear, concise, adequate guidance which includes but is not limited to: • Scope definition, • Hazard identification and analysis, • Walk downs, • Tailoring of instructions and controls, • Responsibilities of reviewers and SMEs • Revisions and pen & ink changes, • Post Job Reviews (PJR). b. Clearly communicate changes and appropriately train the workforce to effectively implement IWCP changes.	Williams 3/31/04 Projects 4/30/04

Site Issue	Desired Outcome		Corrective Actions	Schedule
			c. Develop examples for Type 1, Standard, and Craft Work IWCP packages.	Williams 3/31/04
	Each Project has a process for review of work packages and procedures that validates the adequacy of work documents for use.	4	Evaluate and revise if necessary, the current process for Project review and release of work packages and procedures to ensure the process: • Validates the type of package • Ensures the scope is appropriately defined and hazards identified • Ensures the level of detail for controls and instructions is appropriate	Projects 3/31/04
	Pre-work execution communications: • Identify and resolve potential conflicts with other activities and facility functions, • Ensure the work crew understands the daily work scope, hazards, and controls	5	Provide clear guidance and expectations for conducting effective Pre-Evolution Briefings and conducting effective Plan of the Day meetings. Revise Site Conduct of Operations Manual, MAN-066-COOP to: • Enhance the Pre-evolution brief process to ensure that the work crew and supervisor fully understand the daily work scope, hazards, and controls and are ready to go to work. • Enhance the Plan Of the Day (POD) process to require discussion of concurrent/sequential work activities than may interact, interfere or impact other activities at the POD. Clearly communicate changes and appropriately train the workforce to effectively implement COOP changes.	Williams 1/19/04 Complete 1/15/04 Projects 02/02/04
	Existing Standing Orders are still appropriate to disseminate information or instructions to Site personnel.	6	Review Standing Orders and revise, extend, supercede, delete, or incorporate as appropriate.	Complete 12/26/03
The emphasis on line management ownership of safety led to a lack of balance between project authority and independent compliance and safety functions.	There is an organization with the charter to ensure that safety significant events and programmatic issues are critically analyzed, reported, and corrected as appropriate.	7	Establish Executive Safety Review Board (ESRB) to oversee the identification, analysis, reporting, and corrective actions of safety significant events and issues with programmatic implications.	Complete 12/12/03

Site Issue	Desired Outcome		Corrective Actions	Schedule
	There is an active and productive interaction between SE&QP and the Projects that ensures a self-critical objective assessment of safety and compliance performance. A balanced set of critical independent assessments and self-assessments are scheduled based on risk and potential consequences, and performed to provide useful information for identifying safety issues and opportunities for improvement. Qualified resources are available to conduct assessments. They are knowledgeable, critical, independent , and can speak with authority and credibility.	8	Revise CY04 Integrated Assessment schedule based on risk priorities. Augment assessment teams as necessary with internal and external resources. Include the following: INDEPENDENT ASSESSMENT • ISM/work control implementation • Implementation of training in the Projects • Self assessment process effectiveness • Cause Analysis and Corrective Action Process including implementation SELF-ASSESSMENTS • Work control execution • Combustible control implementation • COOP – accountability, formality of ops, HIS 20, housekeeping	Ford 1/31/04
	Site Safety Management Program (SMP) owners provide information useful to the Site in identifying needed SMP improvements and SMP weaknesses.	9	Meet with all Site Safety Management Program (SMP) owners to reaffirm expectations and accountability for their role as SMP owners in assessing SMP health, communicating issues, and establishing SMP Assessment Criteria.	Lyle 2/13/04
	The Safety Analysis Center (SAC) information is used by the Site in recognizing individual, multiple, and programmatic safety issues and effecting corrective action..	10	Enhance the Safety Analysis Center (SAC) process to: • Improve identification of programmatic & collective significance of events, potential trends, and precursor conditions • Establish an active Interface with the ESRB and criteria for referring events and analyses to the ESRB • Adopt ORPS Cause codes • Establish and report on procedural compliance metrics • Clarify process for dispositioning of DOE Facility Representative comments • Collect and disseminate Independent and Self Assessment data to SMP owners • Provide input to Communications on trends, emerging, or cyclic issues for use in employee communication tools.	Williams 2/20/04

Site Issue	Desired Outcome		Corrective Actions	Schedule
	Questions about the independence, sincerity, and depth of the GB-8 fire investigation are satisfied.	11	Conduct an independent review of GB-8 fire, investigation, Cause Analysis, corrective actions.	Spears 2/6/04
	The K-H self assessment program meets the highest standards and provides useful, self critical information for projects to use in continuous improvement.	12	Benchmark assessment programs at other sites. Evaluate assessment processes and revise as necessary to include appropriate treatment of precursor conditions	Ford 3/31/04
	K-H's safety and compliance status is verified by corporate assessments.	13	CH2M Hill Corporate perform periodic assessments of selected safety functions. Include evaluation of the impact that communications have had on safety culture on the floor.	Christopher 1/30/04 (Initial)
	Implementation of work control, combustible control, conduct of operations, and formality of operations is measured by critical self-assessments.	14	Perform self assessments in the following areas: • Work control and execution • Combustible control program implementation • Use of accountability boards • Formality of operations in CCA offices • Use of HIS 20 system • Housekeeping in out of the way areas	Projects 3/31/04